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NVIC 03-05

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NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 03-05

Subj: GUIDANCE FOR OVERSIGHT OF POST-LICENSING ACTIVITIES ASSOCIATED
WITH DEVELOPMENT OF DEEPWATER PORTS (DWPs)

1. PURPOSE. This circular establishes policy to supplement existing Coast Guard regulations and directives. It provides guidance related to design, plan review, fabrication, installation, inspection, maintenance, and oversight of deepwater ports regulated under Title 33, Code of Federal Regulations (CFR), subchapter NN, parts 148, 149, and 150. It draws assistance from multiple resources, recognizes acceptable design guides and industry standards, establishes procedures for selection and acceptance of an entity to act on behalf of the Coast Guard, discusses review and acceptance of DWP Design Basis, and identifies roles and responsibilities of involved parties. Additionally, it outlines procedures for coordinating activities between Coast Guard Headquarters, the Marine Safety Center, Captains of the Port (COTP) and Officers in Charge of Marine Inspection (OCMI), as applicable.
2. ACTION.
 - a. DWP operators, Certifying Entities, and Coast Guard personnel are encouraged to follow the procedures set forth in this document.
 - b. This NVIC is available on the World-Wide Web at: <http://www.uscg.mil/hq/g-m/nvic/index.htm>. The Coast Guard will distribute it internally by electronic means only.
3. DIRECTIVES AFFECTED.
 - a. Marine Safety Manual, Volume VI, Chapter 2. COMDTINST M16000.11.

DISTRIBUTION – SDL No. 141

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4. BACKGROUND.

- a. In 1974, in response to the growing domestic demand for imported oil and the energy industry's declared intent to construct deepwater ports, Congress passed the Deepwater Port Act (DWPA), as amended (33 USC 1501). As defined in the original DWPA, a deepwater port is "any fixed or floating manmade structure other than a vessel, or any group of structures, located beyond the territorial sea and off the coast of the United States and which are used or intended for use as a port or terminal for the transportation, storage, or further handling of oil for transportation to any State...". The basic tenets of the original DWPA are to:
 - (1) Authorize and regulate the location, ownership, construction and operation of deepwater ports in waters located beyond State seaward boundaries;
 - (2) Provide protection for the marine and coastal environment by preventing or minimizing any adverse impact which might occur as a consequence of the port;
 - (3) Protect the interests of the United States and those of adjacent coastal States in the location, construction and operation of deepwater ports;
 - (4) Protect the rights and responsibilities of States and communities to regulate growth, determine land use and otherwise protect the environment in accordance with law;
 - (5) Promote the construction and operation of deepwater ports as a safe and effective means of importing oil into the United States and transporting oil from the Outer Continental Shelf (OCS) while minimizing tanker traffic and the risks attendant thereto; and
 - (6) Promote oil production on the OCS by affording an economic and safe means of transportation of OCS oil to the United States mainland.
- b. Upon passage of the DWPA, the Coast Guard published, in 1975, the deepwater port regulations, 33 CFR, chapter I, subchapter NN (Parts 148, 149 and 150). These regulations amplified the DWPA by providing a detailed framework for obtaining a deepwater port license and operating a deepwater port. Part 148 addresses licensing requirements, Part 149 concerns engineering/technical requirements and Part 150 focuses on facility operations. The Coast Guard processed three oil deepwater port license applications in the late 70s and issued two licenses. The Louisiana Offshore Oil Platform (LOOP) commenced operations in 1981 and has been the only operational U.S. deepwater port ever constructed to import oil.
- c. In the 1990s, the energy industry advised Congress of their growing concern that the deepwater regulations were too burdensome and restrictive and hindered the competitiveness of the deepwater ports with other modes of importing or transporting oil. Operational experience with LOOP indicated the regulations for engineering and technical requirements were too prescriptive and did not encourage the use of proven industry standards or introduction of innovative technologies.
- d. In 1996, the DWPA was amended by the Deepwater Port Modernization Act (DWPMA) to:

- (1) Update and improve the Deepwater Port Act of 1974 (33 U.S.C. 1501 et seq.);
 - (2) Assure that the regulation of deepwater ports is not more burdensome or stringent than necessary in comparison to the regulation of other modes of importing or transporting oil;
 - (3) Recognize that deepwater ports are generally subject to effective competition from alternative transportation modes and eliminate unnecessary federal regulatory oversight or involvement in the port's business and economic decisions; and
 - (4) Promote innovation, flexibility, and efficiency in the management and operation of deepwater ports by removing or reducing any duplicative, unnecessary, or overly burdensome federal regulations or license provisions.
- e. To implement the Modernization Act, update deepwater port regulations and solicit comments from the public and industry, the Coast Guard published an Advanced Notice of Proposed Rulemaking (ANPRM) on August 29, 1997 (FR Vol. 62, No. 168). On May 30, 2002, after considering public comments, the Coast Guard published a Notice of Proposed Rulemaking (NPRM) which updated the DWP regulations and solicited comments from the public and industry. On November 25, 2002, shortly after the comment period closed for the NPRM, the Maritime Transportation Security Act (MTSA) of 2002 was signed into law and amended the DWPA to add natural gas. Additionally, the MTSA also called for the development of implementing regulations "as soon as practicable," and authorized publication of a temporary interim rule without regard to the usual public notice and comment provisions of the Administrative Procedure Act.
- f. On January 6, 2004 (FR, Vol. 69, No.3), we published a Temporary Interim Rule (TIR) to address the addition of natural gas to the DWPA. It remains effective until October 1, 2006 by which time a final rule should be published.
- g. Throughout the DWP rulemaking process, we endeavored to develop regulations that were consistent with legislative mandates and sensitive to the needs of the public and industry alike. One primary goal, identified in the DWP Modernization Act and reflected in our TIR, is to promote innovation, flexibility, and efficiency in the management and operation of deepwater ports by removing or reducing any duplicative, unnecessary, or overly burdensome federal regulations or license provisions. Rather than prescribing requirements by regulation, the TIR authorizes the licensee to consolidate within the deepwater port operations manual all aspects of port-related activities including vessel traffic control, cargo transfer operations, maintenance of all vital engineering systems, safety and environmental issues, emergency measures and port security, and personnel qualifications.
- h. Since the MTSA was signed into law, we have reviewed and evaluated a broad range of design concepts. The proposals included use of Gravity Based Structures (GBS), Submerged Turret Loading systems (STL), conversion of existing fixed offshore platforms, submerged underground LNG salt cavern storage arrangements, and Floating Storage and Regasification Units (FSRU). As described in the preamble of the TIR, we chose not to attempt to identify specific standards

and stated we would work to determine the adequacy of classification society guides and other relevant and proven standards. The following excerpt from the Preamble of the TIR summarizes our plans for addressing design standards:

"Accordingly, in this temporary interim rule we have removed references to industry standards in our regulatory text, and instead, we have written into the regulations performance levels that we believe deepwater ports must meet. Applicants and operators will need to demonstrate the ability to maintain these prescribed levels. We are not ready to identify industry standards in the regulations that will have the force of law for both regulators and the regulated public. The Deepwater Port Modernization Act of 1996 was intended to encourage flexibility and innovation and to avoid writing regulations that fit the existing model for deepwater ports represented by the Louisiana Offshore Oil Port (LOOP). DPMA supports detailing port specific requirements in the license or, as much as possible, in the port's operations manual. With rapid advances in technology, such as those now seen in the offshore energy and transportation industry, new regulations may lag and existing ones may not fully apply to proposed innovations. The current situation is similar to one that existed 15 years ago when tension leg platforms were introduced to access oil and gas on the U.S. Outer Continental Shelf at previously unattainable water depths. At that time industry submitted a design basis plan that the Coast Guard reviewed and approved as the standards to be used for a particular project. Now, applicants for deepwater port licenses have identified proposed standards or a design basis plan within their applications. The Coast Guard is identifying appropriate standards as part of the application reviews and for inclusion in the final rule for deepwater ports. In doing so, we will combine, to the extent practicable, existing standards and regulations that have proven successful for vessels, offshore structures, and onshore liquefied natural gas (LNG) import terminals. In addition, several classification societies are developing guides for offshore LNG terminals. We will work with them and other Federal agencies having experience in various aspects of oil and LNG terminals to determine the adequacy of these guides and other relevant standards and regulations, such as NFPA 59A and 49 CFR part 193."

- i. Since the publication of the TIR, we have examined an extensive number of potential standards and guides related to the design and construction of deepwater ports. This has served to further validate our thoughts in developing the TIR. Given the range of design variation among proposed deepwater ports, and the spirit of the DWPMMA, it is not practicable to identify a specific regulatory regime that would incorporate all the individual standards (U.S. and International) which could be applied. We have concluded that the rules and guides published by the recognized classification societies not only identify specific standards that we would otherwise identify individually, but more importantly provide a sufficient framework for design, fabrication, installation, and maintenance to ensure safe designs and operations. Utilization of class society rules and guides is consistent with requests from industry and establishes criteria for review, approval, and enforcement.
- j. Given the resources and levels of expertise needed to address the dynamic range of designs for DWP's, we are using a new approach for the review, approval and inspection of these projects, but one that is similar to existing Coast Guard programs. The Coast Guard, along with other federal agencies, recognizes the value in utilizing third parties to assist in fulfilling its regulatory obligations. The Minerals Management Service (MMS), the Federal Energy Regulatory Commission (FERC), and the Pipeline and Hazardous Materials Safety Administration Office of Pipeline Safety (PHMSA-OPS), administer programs and periodically obtain assistance from outside sources in technical areas similar to those now delegated to the Coast Guard under the DWPA. Currently, the Coast Guard uses third parties to accept vapor control systems at

waterfront facilities (33 CFR 154.804), and to approve containers that comply with the International Safe Container Act (49 CFR 450). Additionally, other programs outlined in Navigation and Vessel Inspection Circulars (NVICs) 10-82, 10-92, and 2-95 assist the Coast Guard by recognizing the service of third party professional engineers and recognized classification societies. We have determined the practice of using third party resources is worthwhile, if not essential, for ensuring that DWP's are designed, fabricated, installed, and maintained in accordance with safe engineering practices. Third party certification documents issued initially and at periodic intervals over the life of a DWP will be provided to the Coast Guard to serve as evidence that all components of the DWP were built and/or are being maintained in accordance with the original approved design standards. Follow-on certification may be conducted by the original Certifying Entity (CE) or other individual accepted by the Coast Guard.

- k. This circular recognizes that deepwater port projects represent tremendous investments which can range on the order of one or several billion dollars. Offshore projects of this magnitude are generally only undertaken with the direct involvement or support of one or more of the major energy companies. To protect their sizeable investments, these companies are generally conservative and cooperate with the Coast Guard and other federal agencies to ensure that a safe and reliable project is obtained. In order to achieve this, they take steps internally and through the use of third party representatives to verify their projects are properly designed, built, and operated. Therefore, the Coast Guard does not consider it necessary to be present for every phase; rather, the Coast Guard can rely on industry professionals while maintaining sufficient oversight to ensure that the applicant and the accepted CEs are carrying out their responsibilities. In so doing, the Coast Guard will be able to tailor its involvement through oversight as appropriate, depending on the complexity of design and their confidence in the abilities of the operator and the CE.
- l. The procedures set forth in this policy provide a framework for managing DWPs in a manner which is consistent with the DWPMA, the approach taken by other federal agencies, as well as other Coast Guard programs. We intend to incorporate details of this policy into the DWP final rule. Notice to the public regarding availability of this guidance will be announced in a Federal Register at which time public comments will be requested to help us further develop and/or refine this policy.

5. DISCUSSION.

- a. General Information - The following paragraphs discuss details related to the program we envision for handling design, fabrication, installation, maintenance and inspection of deepwater ports. Enclosures (1) through (4) incorporate the information presented in this discussion and provide a framework which outlines the roles and responsibilities of involved parties throughout different phases of a project. Participation is not mandatory. However, due to the scope and complexity of many deepwater port projects, the evaluation and approval process can be greatly facilitated with the involvement of third party technical specialists. Those agreeing to participate would be expected to follow the guidance provided.
- b. Applicability - All DWP operators subject to the rules effective January 6, 2004.

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c. Definitions - The following definitions, derived from the Code of Federal Regulations (CFRs), are applicable:

- (1) Operator - means the person who is licensed under 33 U.S.C. 1503 to own, construct, and operate a deepwater port, or the person's designee.
- (2) Certifying Entity (CE) - means an individual or organization, other than the operator, accepted by Commandant (G-MSO) to perform tasks on behalf of the Coast Guard such as reviewing plans and calculations for construction of deepwater ports, conducting inspections, witnessing tests, and certifying that systems and/or components associated with deepwater ports are safe and suitable for their intended purpose.

d. Nomination of CE - For each deepwater port, the operator may nominate a CE for Coast Guard approval. The nominee must be capable of performing all tasks normally performed by the Coast Guard throughout the project from concept review to final certification. Operators must formally notify the Coast Guard of their proposed choice of a CE and must submit a nomination letter to Commandant (G-MSO-5) for acceptance. Nomination letters should be submitted as early as possible and shall include the following:

- (1) Name and address of the nominated individual or organization;
- (2) Size and type of the nominee's organization or corporation;
- (3) Previous experience as a CE, Certified Verification Agent (CVA), or similar third-party representative;
- (4) Experience in design, fabrication, or installation of fixed offshore oil and gas platforms, similar fixed, floating or gravity based structures, and project related structures, systems and equipment;
- (5) Technical capabilities (including professional certifications and organizational memberships) of the nominee or the primary staff to be associated with the certifying functions for the specific project;
- (6) In-house availability of, or access to, appropriate technology (i.e., computer modeling programs and hardware, and testing materials and equipment);
- (7) Ability to perform and effectively manage certifying functions, inspections, and tests for the specific project considering current resource availability;
- (8) Previous experience with regulatory requirements and procedures;
- (9) A statement signed by the chief officer of the organization or the chief officer's representative that the nominee –

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- a) Is not owned or controlled by the designer, manufacturer, or supplier of the system and its subsystems of the equipment or material to be inspected or tested under regulations applicable to this deepwater port or any manufacturer of similar equipment or material; and
 - b) That an official representative of the Coast Guard is allowed access upon request to the place where tests and inspections take place, to verify the information submitted in the application, or to witness tests and inspections;
- (10) The level of work to be performed by the nominee; and
- (11) A list of documents and certifications to be furnished to the Coast Guard by the nominee.
- e. Pre-Acceptance Interview - Nominees, unless previously accepted for similar projects, must be interviewed by the Coast Guard for the purpose of assessing the scope of their abilities. Nominees should provide a presentation detailing their ability to perform actions on behalf of the Coast Guard. Required actions include but are not limited to evaluating proposed design standards; conducting plan review; drafting plan approval letters and related correspondence; maintaining records; drafting action plans; evaluating alternative systems and designs; verifying design compliance; assessing existing structures; evaluating novel concepts; certifying systems and equipment; performing inspections; verifying adequacy of materials; witnessing tests; conducting quality assessments; evaluating risk; and communicating information to the Coast Guard. The presentation shall take place at Coast Guard Headquarters in Washington, D.C. and include Commandant (G-MSO-5), and the Marine Safety Center (MSC). The nominee is expected to be familiar with the project and should be prepared to briefly answer questions about handling the project on behalf of the Coast Guard. Additionally, the nominee should identify any areas of concern and discuss their initial impression of the project.
 - f. Coast Guard Acceptance of Nominee - Commandant (G-MSO-5) shall consult with the MSC and provide a letter to the operator and the nominee indicating their decision to either accept or reject the nominee to act on their behalf. If accepted, the nominee shall be designated as the CE for the Coast Guard on the project.
 - g. Initial Presentation and Periodic Meetings - Prior to the start of the design review phase, CEs shall provide an initial presentation to the Coast Guard outlining details of their plans for handling the project and interacting with the Coast Guard. Primary focus of the initial meeting will be concentrated on identifying various phases of the project (i.e. design, fabrication, installation, testing, etc.), establishing dates and timelines, designating points of contact, and discussing project specific details. CEs will be required to submit an action plan to the Coast Guard for each phase of the project detailing their plans for interacting with and acting on behalf of the Coast Guard. Action plans for the design phase should be submitted at the initial meeting. Action plans for other phases of the project should be submitted at least 60 days prior to the date the phase is scheduled to begin. The MSC will review and approve action plans for the design phase based on the requirements of Enclosure (1). All other action plans will be reviewed and approved by Commandant (G-MSO-5). Guidance for the fabrication and installation phases is provided in Enclosures (2) and (3). Periodic meetings between the CE and the Coast Guard are recommended

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prior to the start of each major phase to identify and discuss details. Meetings and presentations shall normally take place at Coast Guard Headquarters in Washington, D.C. and will include Commandant (G-MSO-5) and the Marine Safety Center. As necessary, Commandant (G-MSO-5) will involve the cognizant COTP/OCMI.

- h. Design Standards - All structures, systems, and components of a deepwater port must be designed, fabricated, installed, and maintained in accordance with the performance standards indicated in 33 CFR 149.625. CEs shall review the design standards proposed by the DWP operator and provide a letter to the Coast Guard indicating their recommendation that the Coast Guard either accept or reject the proposed standards. Guides for offshore LNG terminals developed by recognized classification societies such as the American Bureau of Shipping (ABS), Det Norske Veritas (DNV), and Lloyd's Register (LR) provide adequate guidance for safe design and may be utilized as the basis for an overall design of a DWP. Though the Coast Guard expects most will choose to apply guidelines or rules developed by a recognized class society, each applicant is free to identify and propose the industry recognized standards they feel are most applicable to their particular design. Deepwater ports certified to be designed, fabricated, installed, and maintained according to class guidelines will be recognized as meeting compliance with this part.
- i. Drawings and Specifications - In lieu of submitting construction drawings to Commandant G-M, as required by 33 CFR 149.615, the DWP operator shall provide a list of all drawings necessary for construction to the CE, the MSC, and Commandant (G-MSO-5). The CE shall review the list of drawings provided by the operator, identify critical systems, structures, and/or components, and request that the operator send such plans to the CE for review and approval. In addition to bearing the seal of a registered professional engineer as required by 33 CFR 149.615(b), each drawing must identify the baseline design standard(s) used as the basis for design, and contain, or be supplemented with, sufficient information to permit a comprehensive review. The CE shall inform the MSC of plans they have requested for review and coordinate with the MSC throughout the review process as indicated in Enclosure (1). If necessary, Commandant (G-MSO-5) may request that the CE conduct a review of plans not previously identified. As indicated in Enclosure (1), the MSC may conduct oversight on selected plans.
- j. Reports - The CE shall provide periodic reports to the Coast Guard throughout various phases of the project. Details of information required during the Fabrication and Installation phase are contained in Enclosures (2) and (3). Prior to initial operation, the CE shall provide the Coast Guard with a final report attesting that the Deepwater Port and all associated components were satisfactorily tested and have been designed, fabricated, and installed according to Professional Engineer certified plans and is suitable for its intended purpose.
- k. Certification - The CE shall provide documents to the cognizant Coast Guard Officer in Charge of Marine Inspection (OCMI) certifying that all major components and critical systems of the DWP are safe and suitable for their intended service and comply with the requirements outlined in 33 CFR Subchapter NN. Major components and critical systems may include but are not limited to all fixed, floating, or gravity based structures; cryogenic piping systems; LNG storage tanks; containment systems; vaporizers; liquefaction systems; loading arms; skid-mounted systems; control and safety systems; flare systems; cranes; lifesaving; firefighting; navigation aids; and

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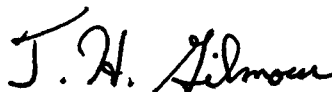
personnel accommodations. Annual certification shall be provided to the OCMI attesting that all components of the Deepwater Port are being operated and maintained according to the original design standards and are safe and suitable for continued service. Annual certification may be provided by the original CE, a recognized class society, or a registered professional engineer acceptable to the cognizant OCMI.

- l. Maintenance - The operator of each DWP is responsible for ensuring that their DWP is maintained and operated in a safe manner. In addition to the items listed in 33 CFR 150.15(n), operators shall develop maintenance programs for all structures, systems, and/or components of the DWP identified by the CE or the Coast Guard as being critical for the protection of personnel or the environment. Maintenance programs should be based on original design standards, guides, or manufacturer's recommendations and shall be submitted to the CE for review. Upon completion of the review, the CE shall provide a recommendation to the cognizant OCMI that the Coast Guard accept, reject, or request modification of the operator's maintenance program. The OCMI will review and comment on the maintenance program and CE recommendations and forward the maintenance program and comments to Commandant (G-MSO-5) for review and approval. Once approved, the maintenance program will form part of the DWPs operations manual.
- m. Inspection - Inspection requirements for DWPs are outlined in 33 CFR 150.100 and 150.105. Unmanned structures, including systems and components connected to unmanned structures, are considered part of the DWP. As such, they are also subject to inspection as outlined in 33 CFR 150.100. Operators shall develop an inspection program which addresses procedures for conducting periodic inspections covering all aspects of the DWP. Inspection programs should be based on original design standards, guides, or manufacturer's recommendations and shall be submitted to the CE for review. Upon completion of the review, the CE shall provide a recommendation to the cognizant OCMI that the Coast Guard accept, reject, or request modification of the operator's inspection program. The OCMI will review and comment on the inspection program and CE recommendations and forward the inspection program and comments to Commandant (G-MSO-5) for review and approval. Once approved, the inspection program will form part of the DWPs operations manual.
- n. Pipelines - The Department of Transportation (DOT) Office of Pipeline Safety (OPS), in cooperation with the Department of Interior (DOI) Minerals Management Service (MMS), will be responsible for regulating offshore pipelines and/or permitting pipeline Rights-of-Way (ROW) associated with deepwater ports. Pipelines shall be designed, fabricated, installed, and maintained in accordance with DOT regulations found in 49 CFR Part 192 or Part 195 based on transported commodity. As applicable, pipelines shall meet DOI's regulations found in 30 CFR Subpart J pertaining to ROW permits. The Coast Guard will maintain responsibility for review and approval of pipelines, risers, and components located between the discharge point of a Pipeline End Manifold (PLEM) up to and including Single-Point Moorings (SPM), Floating Storage and Regasification Units (FSRU) or other floating marine terminal. Pipelines and risers on fixed structures will be regulated by DOT and DOI pursuant to their respective authorities. Commandant (G-MSO-5) will consult with DOT and DOI on issues related to pipelines for DWP projects and may request assistance in other areas where DOT and DOI have established federal

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regulations, policy, and expertise. Operators should contact DOT and DOI regional offices for guidance related to pipeline plan submission and requirements applicable to their specific project.

- o. Fixed Structures (New and Existing) - New and existing fixed OCS structures which are proposed for use as component of a DWP will be reviewed and approved jointly by the Coast Guard and the MMS. These structures must be designed, fabricated, installed, and maintained in accordance with the requirements outlined in American Petroleum Institute RP-2A, 21st Edition. Operators desiring to use existing structures must provide original design information, survey reports, recent structural analysis, and other related information which demonstrates the existing structure is safe for its intended purpose. Plans and information for new and existing structures shall be sent to the MSC and the MMS regional office nearest to where the structure is or will be located. The MSC will work with Commandant (G-MSO-5) to coordinate issues related to fixed platforms.
6. DISCLAIMER. While the guidance contained in this document may assist the industry, public, Coast Guard and other Federal and State regulators in applying statutory and regulatory requirements, the guidance is not a substitute for applicable legal requirements; nor is it a regulation itself. Thus, it is not intended to nor does it impose legally binding requirements on any party, including Coast Guard, other federal agencies, states or the regulated community.
7. QUESTIONS. Questions, comments, and suggested changes may be directed to Commandant (G-MSO-5) at (202) 267-0578.



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- Encl: (1) Deepwater Port (DWP) Guidance - Design Phase
(2) Deepwater Port (DWP) Guidance - Fabrication Phase
(3) Deepwater Port (DWP) Guidance - Installation Phase
(4) Deepwater Port (DWP) Guidance - Maintenance and Inspection

NON-STANDARD DISTRIBUTION

B:a Commandant G-LMI, G-MOC, G-MSE

C:m Marine Safety Center

Deepwater Port (DWP) Guidance – Design Phase

PURPOSE. This document outlines roles and responsibilities of the Marine Safety Center (MSC), Commandant (G-MSO-5), DWP operators, Coast Guard accepted Certifying Entities (CE), and local Coast Guard Marine Safety Offices during the design phase of DWP projects.

APPLICABILITY. DWP operators, Coast Guard accepted CEs, and applicable Coast Guard Offices.

DISCUSSION. DWPs must be designed in accordance with approved plans which meet applicable state and federal laws and are based on recognized industry standards and specifications. To verify this is accomplished, DWP operators may utilize the services of a CE. The CE will serve as an independent party acting on behalf of the Coast Guard to verify DWP structures, components, and/or systems are designed to acceptable recognized industry design standards and specifications. The Coast Guard will conduct oversight to ensure the CE is fulfilling their duties.

ACTION. DWP operators, Coast Guard accepted CEs, and applicable Coast Guard Offices are encouraged to follow the procedures set forth in this document.

Construction Drawing Lists:

- A. OPERATOR- The operator shall provide the CE, the MSC, and Commandant (G-MSO-5) with a list of construction drawings required for constructing the DWP.
- B. CE- The CE shall review the operator's list of construction drawings and identify the drawings the operator must submit to the CE for review. The CE shall provide Commandant (G-MSO-5) and the MSC with a copy of the list for their determination of whether additional plans should be reviewed by the CE. At a minimum, drawings requiring CE review shall include:
 - i. Fire fighting
 - ii. General arrangements
 - iii. LNG Storage and Containment systems
 - iv. Fire detection
 - v. Gas detection
 - vi. Egress
 - vii. Lifesaving
 - viii. Re-gasification and/or Liquefaction systems
 - ix. Emergency power
 - x. Emergency shutdowns
 - xi. Hazardous area classification
 - xii. Structures (Fixed, Floating, or Gravity-Based)
- C. MSC- The MSC will review the operator's list of construction drawings and the CE's request for drawings and determine if the scope of review performed by the CE will be

sufficient. MSC will provide comments related to the scope of the CE's review to Commandant (G-MSO-5).

- D. COMDT- Commandant (G-MSO-5) will review the operator's list of construction drawings, list of plans to be reviewed by the CE, and comments provided by the MSC to determine if scope of plan review will be sufficient. If necessary, Commandant (G-MSO-5) will confer with the MSC and request that the CE perform additional plan review.

Detailed Design Basis Document:

- A. OPERATOR- In conjunction with the list of plans submitted in item 1, the operator shall submit to Commandant (G-MSO-5), through the CE and the MSC, a detailed design basis document for review and approval. The design basis document shall identify all baseline design standards, regulations, rules and/or codes used to design each structure, system, or component associated with construction of the DWP and shall identify the key parameters used in design.
- B. CE- The CE shall review the operator's detailed design basis document and shall work with the operator to construct a document suitable for submission to the Coast Guard for approval. Upon completion, the CE shall forward the document to the MSC and Commandant (G-MSO-5) with a recommendation that the Coast Guard accept, reject, or request modification of the operator's detailed design basis document.
- C. MSC- The MSC will evaluate the operator's detailed design basis document and recommendations provided by the CE. Upon completion, the MSC will provide comments to Commandant (G-MSO-5).
- D. COMDT- Commandant (G-MSO-5) will review and approve the operator's detailed design basis document considering recommendations of the CE and comments provided by the MSC.

Design Phase Action Plan:

- A. CE- Prior to the start of plan review and submission of plans, the CE shall submit a design phase action plan to the MSC and Commandant (G-MSO-5) for approval. The plan shall include the following:
 - i. A list of structures, systems, or components of the DWP, the CE considers critical, or having special interest with regard to safety.
 - ii. Anticipated submission schedule and project timeline.
 - iii. Proposed method of providing the Coast Guard access to all drawings/analyses.
 - iv. Proposed method of communicating progress of design review, approving plans, tracking comments, retaining records, and other related administrative matters.As described in Marine Safety Center Technical Note (MTN) 04-03, Change 1,

the MSC has a process for receiving third party notifications, but is willing to discuss proposals involving other methods.

- v. Proposed method(s) for verifying comments or conditions of approval are met.
 - vi. Other items the CE considers necessary for the best interest of the Coast Guard.
- B. COMDT- Commandant (G-MSO-5) will review the design phase action plan submitted by the CE and provide comments to the MSC.
- C. MSC- The MSC will review and approve the CE's design phase action plan considering comments provided by Commandant (G-MSO-5).
- D. CE- The CE shall adhere procedures outlined in the approved design phase action plan.
- E. MSC- The MSC will notify Commandant (G-MSO-5) if the CE fails to comply with the MSC approved design phase action plan.

Submission of Drawings:

- A. OPERATOR- The operator shall supply construction drawings, calculations, analyses, and other information requested by the CE, the MSC, or Commandant (G-MSO-5). The operator shall ensure construction drawings and specifications bear the seal, or a facsimile imprint of the seal, of the registered Professional Engineer responsible for the accuracy and adequacy of the material as specified in 33 CFR 149.615(b).
- B. CE- The CE shall ensure that a registered Professional Engineer has reviewed and stamped all plans submitted by the operator. Plans which do not bear PE seals, as described in 33 CFR 149.615(b), shall be returned to the operator without action.

Plan Review:

- A. CE- The CE shall ensure the proposed DWP has been designed:
- i. To the standard(s) approved by the Coast Guard.
 - ii. In accordance with the applicable provisions of 33 CFR Subchapter NN, conditions of the license, and applicable State and Federal laws.
 - iii. To factors of safety adequate for all intend operations and environmental conditions to which the DWP may be subject to in service.

The CE shall consider and use good engineering practice in conducting an independent assessment of the adequacy of hazard and reliability studies, structural components, safety systems, process and regasification equipment, hazardous area classifications, general arrangements, structural fire protection, gas & fire detection systems, fire fighting equipment, and other areas specifically requested to be reviewed by the MSC or Commandant (G-MSO-5).

The CE shall evaluate the environmental data, load determinations, stress analyses, material designations, soil and foundation conditions, safety factors, and other relevant data and assumptions used in the design.

- B. MSC- The MSC will conduct oversight, as necessary, to ensure the CE is adequately fulfilling their responsibilities described in this document. The focus of the MSC oversight will likely vary between different DWP's and will normally be determined by the specific design considerations and features associated with each DWP. Drawings the Coast Guard requires the CE to review are likely to be the primary focus of oversight by the MSC.

Plan Review Correspondence:

- A. CE- The CE shall ensure Commandant (G-MSO-5), the MSC, and cognizant Officer in Charge of Marine Inspection (OCMI) receive copies of formal correspondence related to DWP plan approval (e.g., approval letters, condition lists for approval, and letters or other correspondence related to closing conditions listed with the approval letter).
- B. MSC- The MSC will communicate results of all oversight, directly to the CE, following either an acceptable communications plan proposed by the CE or the procedures identified in Marine Safety Center Technical Note (MTN) 04-03, Change 1. The MSC will copy Commandant (G-MSO-5) and the OCMI on correspondence related to DWP design and plan review.
- C. OCMI- The OCMI will copy Commandant (G-MSO-5) and the MSC on correspondence related to DWP design and plan review.
- D. OPERATOR- The operator shall ensure changes or modifications necessary to satisfy comments generated by the CE, or the MSC while conducting plan review or oversight, are made in a timely manner.
- E. CE- The CE shall provide Commandant (G-MSO-5), the MSC, and/or the cognizant OCMI with copies of approved plans upon request.

Special Requests (i.e., Equivalencies, Exemptions, Use of Alternate Design Standards or Modified Standards):

- A. OPERATOR- The operator shall submit requests for equivalency, requests for exemptions, requests to use alternate design standards and requests to deviate from accepted design standards to Commandant (G-MSO-5) through the CE and the MSC.
- B. CE- The CE shall evaluate operator requests for equivalency, requests for exemption, requests to use alternate design standards or requests to deviate from accepted design standards and shall forward such requests to Commandant (G-MSO-5) through the MSC with a recommended action.

- C. MSC- The MSC shall evaluate operator requests for equivalency, requests for exemption, requests to use alternate design standards or requests to deviate from accepted design standards and shall forward such requests to Commandant (G-MSO-5) with comment.
- D. COMDT- Commandant (G-MSO-5) will review and approve: design standards; detailed design basis documents; operator requests for equivalency; requests for exemption; requests to use alternate design standards; and requests to deviate from accepted design standards based on recommendations of the CE and comments provided by the MSC.

Interim Reports:

- A. CE- The CE shall provide interim reports to the Coast Guard throughout the design phase. Content of the interim report(s) shall be agreed upon between the MSC and the CE prior to the start of the design phase. Copies of the interim report shall be provided to MSC, Commandant (G-MSO-5), and the cognizant OCMI.
- B. OCMI- The OCMI will review the CE's interim reports and provide comments to Commandant (G-MSO-5) and the MSC.
- C. COMDT- Commandant (G-MSO-5) will review the CE's interim reports and provide comments to the MSC.
- D. MSC- The MSC will accept or reject the CE's interim reports.

Final Reports:

- A. CE- Prior to start of fabrication, but not more 30 days upon completion of the design phase, the CE shall prepare a final report which summarizes the material reviewed and approved by the CE and provides a recommendation that the Coast Guard either accept, request modification(s), or reject the proposed design. In addition, the report shall include the particulars of how, by whom, and when the independent review was conducted and any special comments considered necessary. Copies of the report shall be provided to the MSC, Commandant (G-MSO-5), and the cognizant OCMI. Note: In some cases, it may be necessary to handle various aspects of a project independently. For instance, design, fabrication, and installation of gravity based structures may be handled independently of other systems and structures associated with the project. Content of the final report(s) shall be agreed upon between the MSC and the CE prior to the start of the design phase.
- B. OCMI- The OCMI will review the CE's final report(s) and provide comments to Commandant (G-MSO-5) and the MSC.
- C. COMDT- Commandant (G-MSO-5) will review the CE's final report(s) and provide comments to the MSC.
- D. MSC- The MSC will accept or reject the CE's final report(s).

General Items:

- A. MSC- A copy of Marine Safety Center Technical Note (MTN) 04-03, Change 1, can be obtained on the World Wide Web at: <http://www.uscg.mil/hq/msc/mtns.htm>.
- B. COMDT- Commandant (G-MSO-5) will act as liaison between all involved parties.

Deepwater Port (DWP) Guidance - Fabrication Phase

PURPOSE. This document outlines roles and responsibilities of the Marine Safety Center (MSC), Commandant (G-MSO-5), DWP operators, Coast Guard accepted Certifying Entities (CEs), and local Coast Guard Marine Safety Offices during the fabrication phase of DWP projects.

APPLICABILITY. DWP operators, Coast Guard accepted CEs, and applicable Coast Guard offices.

DISCUSSION. DWPs must be fabricated in accordance with approved plans and procedures. To verify this is accomplished, DWP operators may utilize the services of a CE. The CE will serve as an independent party acting on behalf of the Coast Guard to verify and certify DWP structures, components, and/or systems are fabricated to the approved plans and design specifications. To ensure the CE is fulfilling their duties, the Coast Guard will conduct oversight.

ACTION. DWP operators, Coast Guard accepted CEs, and applicable Coast Guard Offices are encouraged to follow the procedures set forth in this document.

Note: The terms fabrication and construction are used interchangeably in this document.

Construction Procedures:

- A. OPERATOR- The operator shall submit detailed construction procedures to the Coast Guard through the CE and MSC for review and approval. Construction procedures shall be based on the proposed procedures submitted as part of the DWP license application outlined in 33 CFR 148.105(v), but shall contain greater detail.
- B. CE- The CE shall review the operator's construction procedures and forward a copy of the procedures to Commandant (G-MSO-5) and the MSC with comments and a recommendation that the Coast Guard approve, disapprove, or request modification of the operator's construction procedures.
- C. MSC- The MSC will review the operator's construction procedures and provide comments to Commandant (G-MSO-5).
- D. COMDT- Commandant (G-MSO-5) will review and approve the operator's construction procedures based on recommendations of the CE and comments provided by the MSC.
- E. OPERATOR- The operator shall ensure the DWP is constructed according to approved plans and safe engineering practices.

Fabrication Phase Action Plan:

- A. CE- The CE shall submit a fabrication phase action plan to Commandant (G-MSO-5) and the MSC for review and approval. The action plan shall provide details of the CEs involvement and must include the following:
 - i. Discussion of Roles and Responsibilities.
 - ii. A list of structures, systems, or components of the DWP the CE will monitor during fabrication.
 - iii. The location(s) where fabrication is to take place.
 - iv. A list of milestones expected during fabrication which the CE believes may be of particular interest to the Coast Guard.
 - v. Anticipated fabrication schedule.
 - vi. Qualifications and experience of CE inspection personnel.
 - vii. Proposed method(s) for communicating with the Coast Guard.
 - viii. Proposed reports and timeline for submission of reports.
 - ix. Proposed method(s) for retaining records and handling other related administrative matters.
- B. MSC- The MSC will review the CEs fabrication phase action plan and provide comments to Commandant (G-MSO-5).
- C. COMDT- Commandant (G-MSO-5) will review and approve the CEs fabrication phase action plan.

Inspections and Oversight:

- A. COMDT- Commandant (G-MSO-5) will coordinate periodic oversight inspections with personnel from the MSC and cognizant Officer in Charge of Marine Inspection (OCMI) as needed throughout the fabrication phase.
- B. MSC- The MSC will support Commandant (G-MSO-5) and Coast Guard field units in conducting periodic oversight.
- C. OCMI- The cognizant OCMI will support Commandant (G-MSO-5) and/or the MSC in conducting periodic oversight. Note: The discretion of the OCMI to attend any aspect of construction is not limited by any guidance provided by this NVIC.
- D. CE- The CE shall carry out inspections and witness necessary tests throughout fabrication to ensure that the DWP is constructed according to approved plans and accepted standards. The CE shall notify Commandant (G-MSO-5) and the cognizant OCMI in advance of approaching project milestones and designated inspections to permit Coast Guard personnel opportunity for attendance.

Modifications or Changes:

- A. OPERATOR- The operator shall submit requests to modify or change previously approved plans or drawings to the CE for review and approval.
- B. CE- The CE shall review, approve, and document requests by the operator to modify or change previously approved plans or drawings. However, if the CE determines the modification or change will affect the status of an approval issued by the Coast Guard or accepted by the Coast Guard through the CE, the CE shall consult with Commandant (G-MSO-5) prior to approving the change or modification. The CE shall document and require the operator to submit requests for any modifications or changes to previously approved plans, drawings, or design standards which the CE identifies in the field.
- C. COMDT- Commandant (G-MSO-5) will consult with the CE on modifications or changes to previously approved plans or drawings brought to their attention by the CE. Commandant (G-MSO-5) will consult with the MSC for technical assistance or defer approval of modifications or changes to the MSC.
- D. MSC- The MSC will provide technical assistance to Commandant (G-MSO-5) and may review and approve modifications or changes upon request of Commandant (G-MSO-5).

Interim Reports:

- A. CE- The CE shall provide interim reports to Commandant (G-MSO-5), the MSC, and the cognizant OCMI as outlined in the approved fabrication phase action plan. Interim reports shall address the following items, as applicable:
 - i. Inspections conducted and tests witnessed.
 - ii. Quality control and assessment of fabricator's Quality Assurance Program.
 - iii. Evaluation of fabrication site facilities.
 - iv. Material quality, identification and tracking methods.
 - v. Adherence with construction procedures.
 - vi. Adherence with specified tolerances.
 - vii. Welding and weld procedure qualification and tests.
 - viii. Repair procedures.
 - ix. Installation of corrosion-protection systems and splash-zone protection.
 - x. Erection procedures to ensure that overstressing of structural members does not occur and structural members are not damaged.
 - xi. Alignment procedures.
 - xii. Dimensional check of the critical structures (i.e., GBS's, fixed platforms, etc.)
 - xiii. Status of quality-control records at various stages of fabrication.
- B. OCMI- The OCMI will review the CE's interim reports and provide comments to Commandant (G-MSO-5) if necessary.

- C. MSC- The MSC will review the CEs interim reports and provide comments to Commandant (G-MSO-5) if necessary.
- D. COMDT- Commandant (G-MSO-5) will accept or reject the CEs interim reports.

Final Report:

- A. CE- Prior to installation, but not more than 30 days after fabrication is complete, the CE shall provide a final report to the Coast Guard covering the adequacy of the entire fabrication phase giving details of how, by whom, and when the independent monitoring activities were conducted and providing any special comments considered necessary. The final report need not cover specific details of fabrication already included in interim reports, but should provide a comprehensive overview of all activities performed. The final report shall describe the CEs activities during fabrication, summarize their findings, and contain a confirmation or denial of compliance with the design specifications and the approved fabrication plan, and a recommendation that the Coast Guard accept or reject fabrication of the DWP. Final reports shall be submitted to Commandant (G-MSO-5), the MSC, and the cognizant OCMI.
- B. OCMI- The OCMI will review the CEs final report and provide comments to Commandant (G-MSO-5) if necessary.
- C. MSC- The MSC will review the CEs final report and provide comments to Commandant (G-MSO-5) if necessary.
- D. COMDT- Commandant (G-MSO-5) will accept or reject the CEs final report.

General Items:

- A. CE- The CE shall handle information in the strictest confidence and shall not release information to persons, other than official Coast Guard personnel, without the consent of the of the DWP operator.
- B. CE- Individuals or organizations acting as a CE for a particular project shall not function in any capacity other than that of a CE for that specific project. Whenever activities would create a conflict, or the appearance of a conflict of interest, the CE shall notify Commandant (G-MSO-5).
- C. MSC- The MSC will provide technical assistance to Commandant (G-MSO-5) and Coast Guard field units as needed.
- D. COMDT- Commandant (G-MSO-5) will act as liaison between all involved parties.

Deepwater Port (DWP) Guidance – Installation Phase

PURPOSE. This document outlines roles and responsibilities of the Marine Safety Center (MSC), Commandant (G-MSO-5), DWP operators, Coast Guard accepted Certifying Entities (CE's), and local Coast Guard Marine Safety Offices during the installation phase of DWP projects.

APPLICABILITY. DWP operators, Coast Guard accepted CE's, and applicable Coast Guard Offices.

DISCUSSION. All components of a DWP must be installed safely and in accordance with accepted standards. To verify this is accomplished; DWP operators may utilize the services of a CE. The CE will serve as an independent party acting on behalf of the Coast Guard to verify installation is done safely and according to plan. To ensure the CE is adequately fulfilling their duties, the Coast Guard will conduct oversight.

ACTION. DWP operators, Coast Guard accepted CE's, and applicable Coast Guard Offices are encouraged to follow the procedures set forth in this document.

Operator's Installation Plan:

- A. OPERATOR- The operator shall submit an installation plan to the Commandant (G-MSO-5) for review and approval through the CE and the MSC. As far as practicable, the installation plan shall be based on accepted standards such as API-RP-2A, WSD, 21st Edition.
- B. CE- The CE shall review the operator's installation plan and forward the plan to Commandant (G-MSO-5) and the MSC with comments and a recommendation that the Coast Guard approve, disapprove, or request modification to the operator's installation plan. The CE shall ensure the installation plan conforms to accepted standards and safe engineering practices.
- C. MSC- The MSC will review the operator's installation plan and provide comments to Commandant (G-MSO-5).
- D. COMDT- Commandant (G-MSO-5) will review and approve of the operator's installation plan.

Installation Phase Action Plan:

- A. The CE shall submit an installation phase action plan to Commandant (G-MSO-5) and the MSC for review and approval. The plan shall include the following:
 - i. Discussion of Role and Responsibility.
 - ii. A list of structures, systems, or components of the DWP, the CE will monitor during installation.
 - iii. The location(s) where installation is to take place.

- iv. A list of milestones expected during installation which the CE believes may be of particular interest to the Coast Guard.
 - v. Anticipated installation schedule.
 - vi. Proposed method(s) for communicating with the Coast Guard.
 - vii. Proposed timeline for submission and content of interim reports.
 - viii. Proposed method(s) for retaining records and handling other related administrative matters.
- B. MSC- The MSC will review the CE's Installation Phase Action Plan and provide comments to Commandant (G-MSO-5).
- C. COMDT- Commandant (G-MSO-5) will review and approve of the CE's Installation Phase Action Plan.

Proper Notification:

- A. OPERATOR- Prior to installation, the operator shall ensure proper notification is made to the Coast Guard District Commander as outlined in 33 CFR 149.610 and to other involved agencies if applicable.

Installation:

- A. CE- The CE shall oversee installation of DWP structures to ensure they are installed in accordance with the approved drawings and Coast Guard approved installation plan. The CE shall oversee all functions related to the installation of structures for the DWP and shall apply good engineering practice in conducting an independent assessment of the adequacy of the installation activities. The following parts of the installation process, as appropriate, shall be witnessed or verified by the CE:
- i. Loadout of structures or components from the fabrication site(s).
 - ii. Initial floatation of structures, if applicable.
 - iii. Towing operations to the specified location(s).
 - iv. Launch and uprighting operations at the specified location(s).
 - v. Submergence operations.
 - vi. Pile, skirt, and/or anchor installations.
 - vii. Deck, component and/or system installations.

The CE shall review towing records and procedures, conduct an onsite survey after transportation to the approved location, inspect and witness installation of structures and determine if the structures have been installed at the approved location in accordance with the approved design and the installation plan. The CE shall observe installation activities, spot-check equipment and on-site construction, verify procedures and recordkeeping requirements, as necessary, to determine compliance with the approved plans, and immediately report to Commandant (G-MSO-5) and the operator any discrepancies or damage to structural members.

- B. COMDT- Commandant (G-MSO-5) will coordinate periodic oversight inspections with personnel from the MSC and cognizant Officer in Charge of Marine Inspection (OCMI) as needed throughout the installation phase.
- C. MSC- The MSC will support Commandant (G-MSO-5) and Coast Guard field units in conducting periodic oversight.
- D. OCMI- The cognizant OCMI will support Commandant (G-MSO-5) and the MSC in conducting periodic oversight.

Modifications or Changes:

- A. OPERATOR- The operator shall submit requests to modify or change the approved operator installation plan to Commandant (G-MSO-5) through the CE and the MSC.
- B. CE- The CE shall evaluate operator requests to modify or change the approved operator installation plan and shall forward such requests with a recommendation to Commandant (G-MSO-5) and the MSC.
- C. MSC- The MSC shall evaluate operator requests to modify or change the approved operator installation plan and provide comments to Commandant (G-MSO-5).
- D. COMDT- Commandant (G-MSO-5) will review and approve requests to modify or change the approved operator installation plan.
- E. CE- The CE shall report modified installation procedures or deviations from approved installation plans noted in the field to Commandant (G-MSO-5) and the MSC.
- F. OPERATOR- The operator shall update operator installation plans to reflect modifications or changes approved by the Coast Guard.

Final Tests and Certification:

- A. CE- Upon final installation of structures, components, and/or systems of the DWP, the CE shall witness necessary tests to determine suitability for service. Upon successful completion of tests, the CE shall provide documents certifying that the structures, components, and/or systems of the DWP have been designed, fabricated, and installed in accordance with their approved plans and are safe and suitable for their intended service. Certifying documents shall be provided to the cognizant OCMI, and Commandant (G-MSO-5).

Interim Reports:

- A. CE- The CE shall submit interim reports to Commandant (G-MSO-5), the MSC, and the cognizant OCMI at intervals agreed upon by Commandant (G-MSO-5) based on the scope of the project.

- B. OCMI- The OCMI will review the CE's interim reports and provide comments to Commandant (G-MSO-5) if necessary.
- C. MSC- The MSC will review the CE's interim reports and provide comments to Commandant (G-MSO-5) if necessary.
- D. COMDT- Commandant (G-MSO-5) will accept or reject the CE's interim reports.

Final Report:

- A. CE- Prior to operation, but not more than 30 days after installation is complete, the CE shall submit a final report covering the adequacy of the entire installation phase giving details of how, by whom, and when the independent monitoring activities were conducted and providing any special comments considered necessary. The final report shall describe the CE's activities during the installation process, summarize the findings, contain a confirmation or denial of compliance with the approved installation plan, and a recommendation to accept or reject the installation. The report shall be submitted to the MSC, Commandant (G-MSO-5), and the cognizant OCMI.
- B. OCMI- The OCMI will review the CE's final report and provide comments to Commandant (G-MSO-5) if necessary.
- C. MSC- The MSC will review the CE's final report and provide comments to Commandant (G-MSO-5) if necessary.
- D. COMDT- Commandant (G-MSO-5) will accept or reject the CE's final report.

General Items:

- A. CE- The CE shall handle information in the strictest confidence and shall not release information to persons, other than official Coast Guard personnel, without the consent of the of the DWP operator. CE- Individuals or organizations acting as a CE for a particular project shall not function in any capacity other than that of a CE for that specific project. Whenever activities would create a conflict, or the appearance of a conflict of interest, the CE shall notify Commandant (G-MSO-5).
- B. MSC- The MSC will provide technical assistance to Commandant (G-MSO-5) and Coast Guard field units as needed.
- C. COMDT- Commandant (G-MSO-5) will act as liaison between all involved parties.

Deepwater Port (DWP) Guidance – Maintenance and Inspection

PURPOSE. This document outlines procedures for developing a maintenance and inspection program for DWP's and outlines roles and responsibilities of Commandant (G-MSO-5), DWP operators, Coast Guard accepted Certifying Entities (CE's), and local Coast Guard Marine Safety Offices during development and implementation of the maintenance and inspection program.

APPLICABILITY. DWP operators, Coast Guard accepted CE's, and applicable Coast Guard Offices.

DISCUSSION. The operator of each DWP is responsible for ensuring that their DWP is maintained and operated in a safe manner. Recognizing that maintenance and inspection are important elements which help to minimize the risk of accidents and equipment failures, the Coast Guard requires all DWP operators to develop comprehensive maintenance and inspection programs based on codes and standards used for construction and tailored for their specific DWP. To verify this is accomplished, DWP operators may utilize the services of a CE. The CE will serve as an independent party acting on behalf of the Coast Guard to work with the DWP operator and verify maintenance and inspection programs are developed according to approved design standards, codes, and/or OEM recommendations.

ACTION. DWP operators, Coast Guard accepted CE's, and applicable Coast Guard Offices are encouraged to follow the procedures set forth in this document.

Maintenance Program:

- A. OPERATOR- The operator shall develop and submit a comprehensive program for maintenance of the DWP to Commandant (G-MSO-5) through the CE and the cognizant OCMI for review and approval. In developing a maintenance program, the operator shall consider the systems identified in 33 CFR 150.15(n) and all other systems, structures, and equipment relied upon for safe operation of the DWP or for protection of personnel or the environment including pipelines and other components or structures of the DWP not traditionally or wholly under jurisdiction of the Coast Guard. In developing a maintenance program, the operator shall consider all design codes and standards used for construction of the DWP, and any recommendations listed in equipment manufacturer's operations manuals. As far as practicable, operators shall model their programs upon recognized industry codes and standards such as those provided by the International Safety Management (ISM) Code, the American Petroleum Institute (API), recognized classification societies or other recognized industry guidance. The operator shall retain maintenance records on the DWP, or at another location agreed upon by the Coast Guard, and shall make maintenance records available to the Coast Guard or other authorized inspectors upon request.
- B. CE- The CE shall review the operator's maintenance program and work with the operator to develop a program suitable for submission to the Coast Guard for approval. Once a program has been developed, the CE shall forward copies of the program to Commandant (G-MSO-5) and the cognizant OCMI with a recommendation that the Coast Guard approve, disapprove, or request modification to the operator's maintenance program.

- C. OCMI- The OCMI shall review the operator's maintenance program and forward comments to Commandant (G-MSO-5).
- D. COMDT- Commandant (G-MSO-5) will review and approve the operator's maintenance program.

Inspection Program:

- A. OPERATOR- The operator shall develop and submit a comprehensive program for inspection of the DWP to Commandant (G-MSO-5) through the CE and the cognizant OCMI for review and approval. Inspection programs may include check lists, inspection books, annual reports, and other guides which may be used by attending inspectors during inspections. The operator shall consider all design codes and standards used for construction of the DWP, and any recommendations listed in equipment manufacturer's operations manuals. As far as practicable, operators shall model their programs upon recognized industry codes and standards such as those provided by the International Safety Management (ISM) Code, the American Petroleum Institute (API), recognized classification societies or other recognized industry guidance. The operator shall develop self-inspection reports covering all components, systems, and structures associated with the DWP (including unmanned structures) and shall submit reports to the cognizant OCMI annually with the information outlined in 33 CFR 150.105.
- B. OCMI- The OCMI shall conduct an onsite inspection prior to initial operation and biennially thereafter. The scope of onsite inspections shall be to the level deemed necessary by the OCMI. As indicated in 33 CFR 150.100, the OCMI may conduct inspections with or without notice at any time deemed necessary. Inspections may be with or without advance notice and may be done in conjunction with other Coast Guard activities at the port such as cargo monitors and vessel exams.
- C. OPERATOR- The operator shall retain inspection records on the DWP, or at another location agreed upon by the Coast Guard, and shall make inspection records available to the Coast Guard or other authorized inspectors upon request.
- D. CE- The CE shall review the operator's inspection program and work with the operator to develop a program suitable for submission to the Coast Guard for approval. Once a program has been developed, the CE shall forward copies of the program to Commandant (G-MSO-5) and the cognizant OCMI with a recommendation that the Coast Guard approve, disapprove, or request modification to the operator's inspection program.
- E. OCMI- The OCMI shall review the operator's inspection program and forward comments to Commandant (G-MSO-5).
- F. COMDT- Commandant (G-MSO-5) will review and approve the operator's inspection program.